

ADAMA  
ESSENTIALS

Tomahawk™

PCS 01803

fluroxypyr as the methyl heptyl ester 200 g/l

A selective post-emergence herbicide for the control of certain annual and perennial broad-leaved weeds in winter and spring cereals, forage and grain maize and grassland.

An emulsifiable concentrate containing 200 g/l (20.4% w/w) fluroxypyr as the methyl heptyl ester.

Also contains solvent naphtha.



#### SAFETY INFORMATION

##### **Danger**

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause respiratory irritation.

May cause drowsiness or dizziness.

**Very toxic to aquatic life with long lasting effects.**

Keep away from heat/sparks/open flames/hot surfaces  
— no smoking.

Wear protective gloves and eye/face protection.

IF SWALLOWED: immediately call a POISON CENTRE or  
doctor/physician.

IF ON SKIN: wash with plenty of soap and water.

IF IN EYES: rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do.

Continue rinsing.

Do NOT induce vomiting.

Dispose of contents/container to a licensed waste  
disposal contractor or collection site except for triple  
rinsed, empty containers which can be disposed of as  
non-hazardous waste.

**To avoid risks to human health and the environment,  
comply with the instructions for use.**

**PCS 01803**

5 litres e

## This leaflet/booklet is part of the approved label.

For advice on medical emergencies, fires or major spills telephone the UK National Chemical Emergency Centre on +44 (0)1865 407333

### IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops	Maximum individual dose (L product/ha)	Maximum total dose (L product/ha)	Latest time of application
Winter wheat, winter barley	2.0	2.0	Before late boot stage (GS 45)
Winter oats, rye, triticale, durum wheat	1.0	1.0	Before first node detectable stage (GS 31)
Spring wheat, spring barley	0.75	0.75	Before flag leaf stage (GS 39)
Spring oats	0.75	0.75	Before first node detectable stage (GS 31)
Forage & grain maize	1.0	1.0	Before 7 leaves unfolded (GS 17)
Grassland (permanent)	2.0	2.0	3 day livestock exclusion
Grassland (newly sown)	0.75	0.75	3 day livestock exclusion

### DIRECTIONS FOR USE

Do not contaminate water with the product or its container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads.

TOMAHAWK™ is a post-emergence aryloxyalkanoic acid herbicide for the control of annual dicotyledonous weeds and perennial weeds in forage and grain maize, wheat, barley, durum wheat, established grassland, oats, rye, seedling leys and triticale.

The best results are achieved when the weeds are actively growing when uptake of TOMAHAWK will be at the optimum. TOMAHAWK acts by uptake from the leaves, and from there is readily translocated to other parts of the plant.

### CEREALS

#### Spring application to winter cereals

**Winter wheat, winter barley, winter oats, winter rye, durum wheat and triticale**  
(see 'Crops & Timings' table for specific crop timing restrictions)

## Rates of use, weed susceptibility and maximum size controlled

Product and rate of use per hectare	1.0 litre TOMAHAWK	0.75 litre TOMAHAWK + rec rate HBN*	2.0 litres TOMAHAWK†
<b>Cleavers</b> <b>Common chickweed</b> <b>Common hemp-nettle</b> <b>Field forget-me-not</b>	250 mm Up to flowering 150 mm 100 mm	250 mm Flowering 150 mm 100 mm	
<b>Black-bindweed</b> <b>Red dead-nettle</b> <b>Henbit dead-nettle</b> <b>Knotgrass</b> <b>Common fumitory</b> <b>Redshank</b> <b>Groundsel</b> <b>Mayweed spp</b> <b>Common field-speedwell</b> <b>Ivy-leaved speedwell</b> <b>Pale persicaria</b>	6 true leaves 4 true leaves 4 true leaves 2 true leaves 2 true leaves Checked up to 2 true leaves As above As above As above As above As above	100 mm 100 mm 100 mm 50 mm 50 mm	
<b>Volunteer potato shoots</b>			Spray when there is adequate foliage i.e. when shoots are between 10 and 40 cm high. Complete control of top growth will not be achieved but a good degree of stunting can be expected.  Best results will be obtained with late timings and high water volumes. See cautions†

\* HBNs are products containing ioxynil and/or bromoxynil. Oxytril CM and Stellox are recommended HBN tank-mix partners used at the manufacturer's recommended rates.

† Cautions to be followed where 2.0 L/ha of TOMAHAWK is applied to winter wheat and winter barley.

1. Do not tank-mix with other pesticides.
2. Avoid overlapping spray bouts.
3. Straw from cereals sprayed with 2.0 L/ha of TOMAHAWK should not be incorporated into the soil. Treated straw should only be used for animal bedding. Manure from animal bedding should only be used where cereals or grassland is to be grown.
4. Do not follow treated crops with winter sown beans or other legumes.
5. Do not drill any legumes, including peas, in the spring following a treated crop.

Where a range of rates are recommended, the higher rate of use will generally give better control, particularly if weeds are not actively growing.

## Autumn application to winter cereals

### Winter wheat, winter barley

(see 'Crops & Timings' table for specific crop timing restrictions)

#### **Rates of use, weed susceptibility and maximum size controlled**

Product and rate of use per hectare	0.5 to 0.75 litre TOMAHAWK + rec rate HBN*
Cleavers** Common chickweed Field forget-me-not	Up to 50 mm Up to 50mm Up to 50mm
Red dead-nettle Henbit dead-nettle Charlock*** Common poppy*** Groundsel*** Mayweed spp*** Shepherd's purse*** Speedwell spp*** Volunteer rape***	Up to 6 true leaves Up to 6 true leaves

\* HBN's are products containing ioxynil and/or bromoxynil. Oxytril CM and Stellox are recommended HBN tank-mix partners used at the manufacturer's recommended rates.

\*\* to control Cleavers it is essential to use a higher rate of use

\*\*\* may be controlled up to 6 true leaves stage of the weed, dependent on the type and rate of HBN used – see manufacturers' instructions.

## Spring application to spring cereals

### Spring wheat, spring barley, spring oats

(see 'Crops & Timings' table for specific crop timing restrictions)

#### **Rates of use, weed susceptibility and maximum size controlled**

Product and rate of use per hectare	0.50 litre TOMAHAWK + rec rate HBN*	0.75 litre TOMAHAWK + rec rate HBN*
Cleavers Common chickweed Common hemp-nettle Field forget-me-not	50 mm 100 mm 100 mm 50 mm	150 mm Flowering 150 mm 100 mm
Black-bindweed Common fumitory Knotgrass	50 mm 50 mm 2 true leaves	100 mm 100 mm 2 true leaves
Mayweed spp Pale persicaria Speedwell spp Groundsel Redshank	2 true leaves 2 true leaves 2 true leaves 2 true leaves 2 true leaves	2 true leaves 2 true leaves 2 true leaves 2 true leaves 2 true leaves

## Crops and Timing

<b>Spring application to winter wheat and winter barley</b>	From the two leaf stage of the crop to before late boot stage (GS 45). When applied in tank-mix with HBN apply up to and including Zadoks GS 31.
<b>Spring application to winter oats, triticale, rye and durum wheat</b>	From the 2 leaf stage of the crop to before first node detectable stage (before Zadoks GS 31).
<b>Spring application to winter wheat and winter barley (volunteer potato shoots)</b>	From 3rd node detectable to the flag leaf ligule visible (Zadoks GS 39).
<b>Autumn application to winter wheat and winter barley</b>	From two leaf stage of the crop up to before 2nd node detectable (before Zadoks GS 32) or end February, whichever is the earliest. After this time follow spring recommendations above.
<b>Spring application to spring wheat and barley</b>	From 2 leaf stage of the crop but before flag leaf stage (before GS 39). When applied in tank-mix with HBN, apply before second node detectable (before Zadoks GS 32).
<b>Spring application to spring oats</b>	From 2 leaf stage of the crop but before first node detectable stage (before Zadoks GS 31).

## FORAGE & GRAIN MAIZE

Apply before the crop reaches 7 leaves unfolded stage and over 20 cm. Optimum timing is between 3-6 leaf stage. Do not apply once the buttress roots (side roots) have started to develop on the first node.

### Rate of use

Apply TOMAHAWK at 1.0 L/ha in 200-300 L/ha water.

### Weed Control

Black nightshade will be controlled from cotyledons up to 6 true leaves stage.

## GRASSLAND

TOMAHAWK can be applied to established grassland or newly sown spring leys when grasses have at least 3 fully expanded leaves. Application can be made in the autumn or the spring. It is important to ensure that weeds are actively growing at the time of application.

### Rate of use on established grassland

Apply TOMAHAWK at 2.0 L/ha in 200-400 L/ha water, using the higher volume in dense vegetation.

### Rate of use on newly sown leys

Apply TOMAHAWK at 0.75 L/ha in 200-400 L/ha water, using the higher volume in dense vegetation. Allow a two week interval between spraying and cutting for hay/silage.

### Weed Control

Newly sown leys at 0.75 L/ha, weed size 50mm:

Common chickweed

Established grassland, 2.0 L/ha:

Common nettle - spray before flowering - a reduction in top growth only can be expected.

Dandelion - spray before flowering.

Curled and broad-leaved docks - spray in the spring when docks are 15-20 cm high at the rosette stage. Large established docks may require a follow up treatment in the following season. If the grass has been cut for hay or silage or grazed over winter, leave for 2-3 weeks to allow sufficient re-growth to occur before spraying.

### COMPATIBILITY

Apply TOMAHAWK alone to triticale. There is no tank-mix recommendation for this crop.

## RESTRICTIONS

Do not use on crops under-sown with clovers or other legumes.

Crops under-sown with grass may be sprayed provided the grasses are tillering.

Do not treat crops suffering stress caused by any factor, e.g. frost, drought etc.

Do not roll or harrow for 7 days before or after treatment.

Avoid drift onto non-target crops.

Keep livestock out of treated areas for 3 days, and until poisonous weeds such as ragwort have died and become unpalatable.

Do not spray if night temperatures are low or if frost is imminent.

Wash equipment thoroughly with water and detergent immediately after use. Traces of Tomahawk can cause harm to susceptible crops sprayed later.

## MIXING AND SPRAYING

For use by tractor mounted/knapsack sprayer only.

### Tractor Mounted Spraying

Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume.

Half-fill the sprayer tank with water; add the required quantity of TOMAHAWK. Top up the sprayer tank with water to the required level and agitate the mixture thoroughly before and during spraying.

On emptying the container, rinse container thoroughly by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of container safely.

### Volume of Water:

Apply in a minimum of 200 litres of water per hectare. Use 400 litres of water per hectare on dense crops.

### Spray Quality

Apply TOMAHAWK as a MEDIUM quality spray (BCPC definition).

## Knapsack Spraying – for use on grassland

When used at a walking speed of 1 metre/second to apply a swath of 1 metre width, most knapsack sprayers fitted with a Lurmark AN 2.0 or similar nozzle deliver approximately 200 L/ha spray volume (or 20 litres per 1000 m<sup>2</sup>). To apply 2.0 L/ha of TOMAHAWK, therefore, use 10 ml of product per litre of spray liquid required. For an application rate of 0.75 L/ha use 3.75 ml per litre of spray liquid required.

Half-fill the sprayer tank with clean water. Add the measured amount of product, with rinsings, to the sprayer tank and fit the tank lid. Gently shake the sprayer, by rocking, to ensure thorough mixing. Top up the tank with water to the correct level. Refit the tank lid and again gently shake the sprayer, by rocking, to ensure thorough mixing.

## DISCLAIMER/CONDITIONS OF SUPPLY

The specified properties of our products and the mode of application stated on this label have been established on the basis of research and experience. Products conform to specification at the time of delivery but, as we exercise no control over their subsequent storage, handling, mixing or use or the weather conditions before, during and after application, all of which may affect the performance of the products, no responsibility or liability will be accepted by us or our re-sellers for any failure in performance, damage or injury to person or property whatsoever arising from the storage, handling, application or use of the products. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in or make recommendations concerning the use of such products. We recommend you contact your dealer to request advice on the suitability of this product for any new and/or unusual growing methods or for new varieties not listed on this label.

Adama Agricultural Solutions UK Ltd  
Unit 15, Thatcham Business Village,  
Colthrop Way, Thatcham, Berkshire, RG19 4LW, UK  
Telephone: 00 44 1635 860555  
Technical helpline: 00 44 1635 876622  
[www.adama.com](http://www.adama.com)  
Email: [ukenquiries@adama.com](mailto:ukenquiries@adama.com)

Tomahawk™ is a trademark of a company of the Adama Group.

© Adama Agricultural Solutions UK Ltd.

Other brand names referred to on this label are trademarks of other manufacturers in which proprietary rights may exist.